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Research on Innovative Behavior of Teachers in Educational Reform from the Perspective of Behavioral Management

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Abstract

This study is a comprehensive investigation into the relationship between working pressure *and innovative behavior of kindergarten teachers. The use of statistical analysis methods, such as means, t-test, ANOVA, correlation, and regression, adds rigor to the study. It is found that, first, the overall working pressure of the tested kindergarten teachers is high and the overall innovative behavior is low; second, there is no difference between the working pressure and innovative behavior of kindergarten teachers in terms of gender and nature of kindergarten, but there are significant differences in terms of age and education; and third, there exists an overall negative correlation between kindergarten teachers' working pressure and innovative behavior; finally, there is a 66.6% predictive power of all dimensions of kindergarten teachers' working pressure on the variable of innovative behavior.*

Keywords: *kindergarten teachers, working pressure, innovative behavior*

Introduction

Teachers are the key to the great plan of education. The key to the modernization of education in China is the construction of the teaching force (Gu, 2021). The Central Committee of the Communist Party of China [CCCP]and the State Council[CSG](2018)stated in the Opinions on Comprehensively Deepening the Reform of Teacher Team Construction in the New Era , issued that teachers are the first resource for educational development (The Central Committee of the Communist Party of China [CCCP]and the State Council[CSG],2018). In the same year, CCCP and CSG also issued Several Opinions on Deepening the Reform and Standardizing the Development of Preschool Education (CCCP and CSG, 2018), which proposed to "vigorously strengthen the construction of kindergarten teachers" and further clarified to ensure the sufficient number of teachers; guarantee the status and treatment of teachers according to the law; improve the teacher training system; establish a sound teacher training system; and strictly manage the teaching force. Then, looking at the current status of kindergarten teachers' practice in China, it is not difficult to find that both income treatment and social status, as well as factors such as career attractiveness and professional development have caused greater working pressure on kindergarten teachers (Qiu, Lin, Xu, Pu,2022).

The innovative behavior of kindergarten teachers serves as an essential source for kindergartens to achieve educational innovation and is an important way to improve the quality

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of kindergarten teaching and learning and to achieve the comprehensive and harmonious physical and mental development of young children (Wang, Lan, Li, 2022). The Professional Standards for Kindergarten Teachers (2016) promulgated by the Chinese Ministry of Education requires that kindergarten teachers should consciously develop their own profession, continue to innovate, take the initiative to participate in teacher professional development training, and continuously improve their professional development. With the constant changes in the Chinese government's family planning policy in recent years, the development of preschool education has seen new opportunities and challenges (Xia, 2020). It has been shown that higher working stress causes a high percentage of individuals among kindergarten teachers to have significant burnout, a phenomenon that has a significant impact on kindergarten teachers' physical and mental health and work behavior, etc. (Zhou, Peng, Fu, Zhang,2019). Results of studies focusing on the relationship between pressure and innovation show that there is a positive (Albort-Morant et al., 2020; Baer, 1998; Yuan, Zhuo, 2016), negative (Naseer et al., 2019; Amabile et al., 1990) and non-linear multiple relationships.

Given the foregoing, the aims of this study are summarized as, first, to understand the current situation of kindergarten teachers' working pressure and innovative behavior; second, to find out whether there is any difference in working pressure and innovative behavior among kindergarten teachers with different background variables; third, to explore the relationship between kindergarten teachers' working pressure and innovative behavior; and finally, to explore the prediction of kindergarten teachers' working pressure on their innovative behavior.

Theoretical Foundations and Literature Review

Working Pressure

Working pressure is a multidimensional concept (Shi, 2003) that refers to the negative emotions experienced by workers as a result of the content of their work, which in turn has a significant impact on an individual's work behavior (Wu, Ren, Wang, He, Xiong, Ma, & Zhang,2021; Li, Zhang, Yang, Yang, Li,2022). Working pressure among teachers was first defined as the negative emotional experience of teachers during the course of their work and may even be accompanied by physiological changes of illness (Kyriacou & Sutcliffe, 1978). Since then, they began to try to understand the specifics of teacher stress by means of measurement. Wang & Zhang (2017) focused on a total of five dimensions of workload, professional expectations, status development, interpersonal relationships, and early childhood factors in their study. Drawing on previous research, this study defines kindergarten teachers' working pressure as the tension felt in the process of carrying out teaching and learning activities, and the negative emotions they experience such as unpleasantness and discomfort. This dimension contains six dimensions: teaching pressure, interpersonal relationship pressure, professional development pressure, management system pressure, work-life conflict pressure, and work feedback pressure.

Innovative Behavior

CCCP and CSG states in the Outline of National Innovation-driven Development Strategy that innovation is the first driving force leading to continuous development and progress in all fields of society, and further integrating the cultivation of scientific spirit, innovative thinking and creative ability, etc. throughout the whole process of education is an important way to achieve educational innovation (CCCP and CSG, 2016). Talents are

related to the prosperity and decline of the country, education concerns the number of talents, and teachers determine the excellence of education (You,Jin,Li,Luo,Ren 2022). In terms of the subject of innovation behavior, be it organizational innovation or team innovation it is ultimately implemented in the innovation behavior of individuals. It is therefore of great importance to study the innovative behavior of teachers in order to understand educational innovation. Innovative behavior refers to a series of processes in which people generate new ideas, promote new ideas (or practices), and implement new ideas (Amabile,1988; Zhou & George,2001; Jing,2006). Following the in-depth research on innovative behaviors, executive innovative behaviors are further divided into following innovative behaviors and exploratory innovative behaviors (Huang, 2018). Drawing on the definition of "innovative behavior" from existing studies, this study defines "innovative behavior of kindergarten teachers" as the process of generating new knowledge and new ideas about oneself, children, and education during the kindergarten day, the dissemination of new knowledge and new ideas, and the dissemination and learning from others or new practices that one explores. This dimension includes four levels: innovative idea generation, innovative idea dissemination, following innovative application, and exploratory innovative application.

A Review of Studies on the Relationship between Working Pressure and Innovative Behavior

Currently, academic studies on the relationship between working pressure and individual innovative behaviors have reached different conclusions. Some scholars have suggested that when individuals feel stress from work, it leads to a decrease in behaviors such as new ideas and practices (Farr & Ford, 1990); however, Bunce and West (2003) found that some stresses (e.g., task difficulty stress) can lead to innovative behaviors. Wang, Lan, and Li (2022), building on Canavuage et al.'s and Rodell and Judge's research on stress, found that stress from job complexity and task conflict can promote innovative behavior, while complex interpersonal relationships and role stress, for example, can cause a decrease in innovative behavior. Scholars working on teacher development have found that the more stressful the job, the less innovative teachers are (Zhu, Ma, & Jiang, 2022). The types of stress faced by kindergarten teachers are complex and diverse, and how these stresses affect teachers' innovative behaviors has yet to be confirmed by further research.

Research Methodology

Research Subjects

The study adopted the whole-group sampling method to select 8 private kindergartens and 21 public kindergartens from five coastal provinces in eastern China (Jiangsu, Zhejiang, Shanghai, Fujian, and Guangdong), and tested the whole sample of the selected kindergartens, with a total of 1103 kindergarten teachers participating in the test, of which a total of 101 completed incomplete questionnaires and regularly completed questionnaires were excluded, yielding a valid questionnaire score of 1002; the effective rate of questionnaire return was 90.84%, and the basic information of the test sample is shown in Table 3-1. In order to gain insight into the reliability of the survey results, the researcher also interviewed six kindergarten teachers who participated in the questionnaire survey, including four from public kindergartens (male 1, female 3) and two from private kindergartens (female 2).

Table 3-1: Basic Information of the Sample

Sample Background	Options	Number of participant(s)	Portion (%)
Age	< 30	554	55.29%
	> 20 and ≤ 40	316	31.53%
	> 40 and ≤ 50	121	12.08%
	> 50	11	1.10%
Gender	Female	900	89.82%
	Male	102	10.18%
Education Level	Junior college, high school and below	37	3.70%
	Junior college	224	22.36%
	Bachelor	701	69.96%
	Master	40	3.99%
Nature of Kindergarten	Public	753	75.15%
	Private	249	24.85%

Data Collection

Questionnaire: The "Kindergarten Teachers' Working Pressure Scale" adopted the six-dimensional scale developed by Alisonand and Berthesen (1995), and transformed the necessary professional discourse system in the context of the reality of Chinese kindergarten education; The "Kindergarten Teachers' Innovative Behavior Scale" integrated the individual innovative behavior scale developed by Scott and Bruce (1994) and Huang (2018), and made the necessary professional discourse transformation in the context of the research reality. The scale consists of 19 questions in four dimensions. The subjects filled in the answers based on the 5-point Likert scale (1 - Strongly Disagree, 5 - Strongly Agree).

Interview: Semi-structured interviews were used in the study, and the design and justification of the interview outline was completed before the study was conducted, and the respondents' position on the research topic was not predetermined to ensure that the interview study obtained true, accurate and rich survey data. During the interview process, with the consent of the interviewees, the entire interview conversation was recorded by means of audio recording, and the verbatim draft of the interview was completed after the interview, and the analysis of the interview content was completed in conjunction with the purpose of this study.

Data Analysis

In this study, the questionnaires were collected in the form of paper version, and the survey data were statistically analyzed using SPSS22.0. Descriptive statistics were used to report the overall situation of the sample and various statistical methods were used to analyze the survey data. The results of the reliability analysis of the 28 questions of the "Kindergarten Teachers' Working Pressure Scale" showed that the Cronbach's alpha coefficient was .84; the Cronbach's alpha coefficients for the six dimensions examined were: teaching work pressure .82; interpersonal relationship pressure .89; professional development pressure .76; management system pressure .83; work-life conflict pressure .86; work feedback stress. 83. The results of the 19-question reliability analysis of the "Innovative Behavior Scale for Kindergarten Teachers" showed that the Cronbach's alpha coefficient was .87; the Cronbach's alpha coefficients for each of the four dimensions examined were: innovative idea generation .83; innovative idea promotion .87, following innovative application .92, and exploratory innovative

application .86. The data results confirm that this study instrument has acceptable reliability. In addition, the interview portion of the data was collected using audio recording and manual transcription, and the coding and analysis of the data was done manually afterwards.

Empirical Results and Data Analysis

Status of Kindergarten Teachers' Working Pressure and Innovative Behavior

Descriptive Statistics of Kindergarten Teachers' Working Pressure

The results of descriptive statistics of working pressure of kindergarten teachers who participated in the test are shown in the following table.

Table 4-1: Descriptive Statistics of Kindergarten Teachers' Working Pressure (N=1002)

Dimensions	Avg.	SD	Ranking
Teaching pressure	2.33	.774	6
Interpersonal pressure	4.34	.653	1
Professional development pressure	3.77	.530	3
Management system pressure	3.89	.779	2
Work-life stress	3.13	.532	5
Work feedback stress	3.48	.950	4
Total working pressure Score	3.49	.393	

Descriptive Statistics of Kindergarten Teachers' Innovative Behaviors

The results of the descriptive statistics of the innovative behaviors of the kindergarten teachers who participated in the test are presented in Table 4-2. As can be seen from Table 4-2, the scores of kindergarten teachers' innovative behaviors ranged from 1.88 to 1.96, meaning that the overall innovative behaviors and dimensions of the tested sample were in the middle to low level. The highest score was for "generating innovative ideas" and the lowest score was for "exploring innovative applications". The overall scores of kindergarten teachers' innovative behaviors were lower than those of other scholars' studies on primary and secondary school teachers' innovative behaviors (Wu, 2021). In addition, only 19.13% of the respondents were willing to "implement new ideas that come up in their work"; 88.17% of the respondents were willing to use the methods used by others rather than exploring new methods when they encountered "new problems" in their work.

Table 4-2: Descriptive Statistics of Kindergarten Teachers' Innovative Behavior(N=1002)

Dimensions	Avg.	SD	Ranking
Innovative Idea Generation	1.96	.747	1
Innovative Idea Promotion	1.94	.775	3
Follow-Up Innovation Application	1.95	.757	2
Exploratory Innovation Application	1.88	.704	4
Total Innovation Behavior Score	1.94	.707	

Variance Analysis of Kindergarten Teachers' Working Pressure and Innovative Behavior on Different Background Variables

T-Check of Kindergarten Teachers' Working Pressure and Innovative Behavior on Gender and Kindergarten Nature

In this study, an independent sample *t*-test was conducted with gender and kindergarten nature as background variables and kindergarten teachers' working pressure and innovative behavior

as dependent variables. It was found that there was no significant difference in work stress and innovative behavior among kindergarten teachers of different genders; similarly, there was no significant difference in work stress and innovative behavior among teachers from kindergartens of different nature.

One-Way Analysis of Variance (ANONA) of kindergarten Teachers' Working Pressure in Terms of Age

There were significant differences in work stress among kindergarten teachers of different ages, and the statistical results are presented by Table 4-3:

Table 4-3: ANOVA of Kindergarten Teachers of Different Ages on Working Pressure.

Dimension	Group	Age	Sample Size	Avg.	SD	F	Scheffe
Teaching pressure	1	Under 30	554	2.39	.769	3.172	None
	2	30-40 (inclusive)	316	2.24	.805		
	3	40-50 (inclusive)	121	2.35	.698		
	4	Over50	11	2.00	.742		
Interpersonal pressure	1	Under 30	554	4.19	.652	22.138***	2>13>1
	2	30-40 (inclusive)	316	4.49	.631		
	3	40-50 (inclusive)	121	4.60	.544		
	4	Over50	11	4.45	.664		
Professi-onal develop-ment pressure	1	Under 30	554	3.71	.522	7.053***	3>1
	2	30-40 (inclusive)	316	3.80	.552		
	3	40-50 (inclusive)	121	3.94	.465		
	4	Over50	11	3.75	.548		
Management system pressure	1	Under 30	554	3.74	.783	15.774***	2>13>1
	2	30-40 (inclusive)	316	4.03	.755		
	3	40-50 (inclusive)	121	4.14	.683		
	4	Over50	11	4.29	.718		
Work-life pressure	1	Under 30	554	3.20	.548	9.133***	1>2
	2	30-40 (inclusive)	316	3.01	.473		
	3	40-50 (inclusive)	121	3.13	.563		
	4	Over50	11	2.85	.370		
Work feedback pressure	1	Under 30	554	3.32	.932	13.163***	2>13>14>1
	2	30-40 (inclusive)	316	3.62	.966		
	3	40-50 (inclusive)	121	3.73	.843		
	4	Over50	11	4.20	.972		
Working pressure	1	Under 30	554	3.43	.386	13.39***	2>13>23>1
	2	30-40 (inclusive)	316	3.53	.391		
	3	40-50 (inclusive)	121	3.65	.369		
	4	Over50	11	3.49	.393		

* $p<.05$** $p<.01$ ***$p<.001$

The above table shows that there is no significant difference in "teaching working pressure" among kindergarten teachers of different ages. However, there were significant differences in the other five dimensions and in the total stress score. Specifically, in terms of interpersonal pressure, teachers aged 30-40 (inclusive) (M=4.49) and teachers aged 40-50 (inclusive) (M=4.60) were significantly higher than teachers under 30 (M=4.19); in terms of professional development pressure, teachers aged 40-50 (inclusive) (M=3.94) were significantly higher than teachers under 30 years (M=3.71); in terms of management system pressure, teachers aged 30-40 (inclusive) (M=4.03) and teachers aged 40-50 (inclusive) (M=4.14) were significantly higher than teachers under 30 (M=3.74); on work-life conflict pressure, teachers under 30 years old (M=3.20) were significantly higher than teachers 30-40 (inclusive) (M=3.01); in terms of work feedback pressure, teachers aged 30-40 (inclusive) (M=3.62), 40-50 (inclusive) (M=3.73) and 50 and older (M=4.20) were significantly higher than teachers under 30 years (M=3.32); finally, in terms of working pressure overall, teachers aged 30-40 (inclusive) (M=3.53) versus teachers aged 40-50 (inclusive) (M=3.65) were significantly higher than teachers under 30 years (M=3.43), and there was also a significant difference between teachers aged 30-40 (including 40) (M=3.53) and teachers aged 40-50 (including 50) (M=3.65).

One-Way Analysis of Variance (ANOVA) of Kindergarten Teachers' Innovativeness by Age

There were significant differences in innovative behavior among kindergarten teachers of different ages, and the statistical results are presented in Tables 4-4:

Table 4-4: ANOVA of Kindergarten Teachers of Different Ages on Innovative Behavior.

Dimension	Group	Age	Sample Size	Avg.	SD	F	Scheffe
Innovative Idea Generation	1	Under 30	554	2.12	.736	18.159***	1>21>3
	2	20-40 (inclusive)	316	1.80	.744		
	3	40-50 (inclusive)	121	1.73	.642		
	4	Over50	11	1.62	.782		
Innovative Idea Promotion	1	Under 30	554	2.11	.779	22.274***	1.21.3
	2	20-40 (inclusive)	316	1.76	.735		
	3	40-50 (inclusive)	121	1.66	.657		
	4	Over50	11	1.71	.782		
Following Innovation Application	1	Under 30	554	2.12	.751	20.956***	None
	2	20-40 (inclusive)	316	1.77	.741		
	3	40-50 (inclusive)	121	1.71	.643		
	4	Over50	11	1.70	.781		
Exploratory Innovation Application	1	Under 30	554	2.02	.694	15.707***	1>21>3
	2	20-40 (inclusive)	316	1.75	.705		
	3	40-50 (inclusive)	121	1.66	.609		
	4	Over50	11	1.65	.754		
Innovative behavior of kindergarten teachers	1	Under 30	554	2.09	.699	21.52***	1>2
	2	20-40 (inclusive)	316	1.77	.692		
	3	40-50 (inclusive)	121	1.69	.597		
	4	Over50	11	1.67	.766		

* $p<.05$ ** $p<.01$ ***p<.001

Table 4-4 shows that there is no significant difference in the application of follow-up

innovation among kindergarten teachers of different ages. However, there are significant differences between the total score of innovation behavior and the other three levels. Specifically, in terms of innovative idea generation, teachers under 30 (M=2.12) were significantly higher than teachers aged 30-40 (inclusive) (M=1.80) versus teachers aged 40-50 (inclusive) (M=1.73); in terms of innovative idea promotion, teachers under 30 (M=2.11) were significantly higher than teachers 30-40 (inclusive) (M=1.76) versus teachers 40-50 (inclusive) (M=1.66); in the application of exploratory innovation, teachers under 30 (M=2.02) were significantly higher than teachers 30-40 (inclusive) (M=1.75) versus teachers 40-50 (inclusive) (M=1.66); on the total score of innovative behavior, teachers under 30 (M=2.09) were significantly higher than teachers 30-40 (inclusive) (M=1.77).

One-Way Analysis of Variance (ANONA) of Kindergarten Teachers' Working Pressure in Terms of Education

Significant differences exist between kindergarten teachers with different educational levels in terms of working pressure, and the statistical results are presented by Tables 4-5:

Table 4-5: ANOVA of kindergarten Teachers with Different Education Levels on Working Pressure (Continued on the Next Page).

Dimension	Group	Education Level	Sample Size	Avg.	SD	F	Scheffe
Teaching pressure	1	Technical secondary, high school and below	37	2.24	.974	1.881	None
	2	Junior college	224	2.29	.813		
	3	Bachelor	701	2.34	.754		
	4	Master	40	2.59	.662		
Interperso-nal pressure	1	Technical secondary, high school and below	37	4.40	.762	5.425**	1>42>43>4
	2	Junior college	224	4.38	.640		
	3	Bachelor	701	4.34	.645		
	4	Master	40	3.94	.667		
Profess-ional development pressure	1	Technical secondary, high school and below	37	3.82	.567	1.145	None
	2	Junior college	224	3.76	.517		
	3	Bachelor	701	3.77	.532		
	4	Master	40	3.63	.534		
Manage-ment system pressure	1	Technical secondary, high school and below	37	4.17	.837	9.069***	1>42>32>4
	2	Junior college	224	4.05	.735		
	3	Bachelor	701	3.84	.778		
	4	Master	40	3.51	.736		
Work-life pressure	1	Technical secondary, high school and below	37	3.12	.597	3.260*	4>2 4>3
	2	Junior college	224	3.09	.522		
	3	Bachelor	701	3.12	.531		

	4	Master	40	3.37	.494		

Table 4-5: ANOVA of Kindergarten Teachers with Different Education Levels on Working Pressure（Continued）

Dimension	Group	Education Level	Sample Size	Avg.	SD	F	Scheffe
Work feedback pressure	1	Technical secondary, high school and below	37	4.14	.980	16.115***	1>31>42>32>4
	2	Junior college	224	3.70	.965		
	3	Bachelor	701	3.40	.922		
	4	Master	40	2.96	.787		
Working pressure	1	Technical secondary, high school and below	37	3.65	.477	6.219***	1>42>4
	2	Junior college	224	3.54	.392		
	3	Bachelor	701	3.47	.385		
	4	Master	40	3.33	.376		

* p<.05 ** p<.01 ***p<.001

As shown in Tables 4-5, there is no significant difference between teachers with different education levels in terms of "teaching working pressure" and "professional development pressure". However, there are significant differences in the four dimensions of "interpersonal relationship", "management system", "work-life conflict", "work feedback" and the total score of working pressure. For example, in terms of interpersonal stress, teachers with junior college, high school and below (M=4.40), junior college teachers (M=4.38) and teachers with bachelor's degrees (M=4.34) were significantly higher than teachers with master's degrees (M=3.49); in terms of management system stress, teachers with junior college, high school and below (M=4.17) versus teachers with college degree (M=4.05) were significantly higher than teachers with master's degree (M=3.51), while teachers with college degree (M=4.05) were significantly higher than teachers with bachelor's degree (M=3.84); in terms of work-life conflict stress, teachers with master's degrees (M=3.37) were significantly higher than teachers with college degrees (M=3.09) and teachers with bachelor's degrees (M=3.12); in terms of job feedback stress, there was no significant difference between teachers with junior college, high school and lower education (M=4.14) and teachers with college degree (M=3.70), but both of them were significantly higher than teachers with bachelor's degree (M=3.40) and teachers with master's degree (M=2.96); finally, in terms of job stress overall, teachers with junior college, high school and lower education (M=3.65) and junior college degree (M=3.54) were significantly higher than teachers with master's degree (M=3.33).

One-way analysis of variance (ANOVA) of kindergarten teachers' innovative ability in terms of education

There were significant differences in innovative behaviors among kindergarten teachers with different academic degrees, and the statistical results are presented in Tables 4-6:

Table 4-6: ANOVA on Innovative Behavior of Kindergarten Teachers with Different Education Levels.

Dimension	Group	Education Level	Sample Size	Avg.	SD	F	Scheffe
Innovative Idea Generation	1	Technical secondary, high school and below	37	1.67	.776	4.798**	4>1
	2	Junior college	224	1.88	.790		
	3	Bachelor	701	1.99	.730		

Dimension	Group	Education Level	Sample Size	Avg.	SD	F	Scheffe
	4	Master	40	2.23	.658		
Innovative Idea Promotion	1	Technical secondary, high school and below	37	1.69	.824	7.078***	4>14>24>3
	2	Junior college	224	1.84	.795		
	3	Bachelor	701	1.96	.749		
	4	Master	40	2.38	.873		
Following Innovation Application	1	Technical secondary, high school and below	37	1.68	.820	5.026**	4>14>2
	2	Junior college	224	1.86	.782		
	3	Bachelor	701	1.98	.739		
	4	Master	40	2.24	.738		
Exploratory Innovation Application	1	Technical secondary, high school and below	37	1.67	.726	1.778	None
	2	Junior college	224	1.85	.773		
	3	Bachelor	701	1.90	.678		
	4	Master	40	2.01	.696		
Innovative behavior of kindergarten teachers	1	Technical secondary, high school and below	3 37	1.68	.752	6.219***	1>4 2>4
	2	Junior college	224	1.86	.747		
	3	Bachelor	701	1.96	.686		
	4	Master	40	2.21	.685		

* $p<.05$ ** $p<.01$ ***$p<.001$

The results of Tables 4-6 show that there is no significant difference between kindergarten teachers' "exploratory innovation application" and "innovative idea generation", "innovative idea promotion", and there were significant differences in the scores of "innovative idea generation", "innovative idea promotion", "following innovative application", and total innovative behavior. Specifically, for "innovative idea generation", teachers with master's degrees (M=2.23) were significantly higher than teachers with junior college and high school degrees or less (M=1.67). In terms of "innovative idea promotion", teachers with master's degrees (M=2.38) were significantly higher than teachers with junior college, high school and lower degrees (M=1.69), junior college degrees (M=1.84) and bachelor's degrees (M=1.96). In terms of "following innovative applications", teachers with master's degrees (M=2.24) were significantly higher than teachers with junior college, high school and below (M=1.68) and junior college degrees (M=1.86). Similarly, on the total score of innovative behavior, teachers with master's degrees (M=2.21) were significantly higher than teachers with junior college, high school and below degrees (M=1.68) and teachers with college degrees (M=1.86).

Correlation Analysis of Kindergarten Teachers' Working Pressure and Innovative Behavior and its Dimensions

In order to find out whether there is a significant linear relationship between kindergarten teachers' working pressure and its dimensions and kindergarten teachers' innovative behavior and its dimensions, this study conducted a product-difference correlation analysis between the

above two variables, and the results are presented in Table 4-7.

Table4-7: Correlation Matrix Between Kindergarten Teachers' Working Pressure and the Dimensions of Innovative Behavior.

	1	2	3	4	5	6	7	8	9	10	11	12
1	-											
2	-.335**	-										
3	-.184**	.680**	-									
4	-.355**	.694**	.548**	-								
5	.267**	-.025	.152**	-.091**	-							
6	-.262**	.502**	.380**	.745**	-.190**	-						
7	.031	.746**	.722**	.809**	.234**	.744**	-					
8	.376**	-.678**	-.566**	-.739**	.135**	-.661**	-.672**	-				
9	.357**	-.706**	-.565**	-.719**	.179**	-.600**	-.645**	.876**	-			
10	.351**	-.670**	-.547**	-.698**	.103**	-.582**	-.635**	.859**	.903**	-		
11	.352**	-.655**	-.541**	-.660**	.125**	-.536**	-.593**	.833**	.836**	.878**	-	
12	.379**	-.715**	-.585**	-.743**	.143**	-.628**	-.672**	.924**	.955**	.961**	.933**	-

* $p<.05$ ** $p<.01$ ***$p<.001$

(Note: 1. teaching working pressure; 2. interpersonal pressure; 3. professional development pressure; 4. management system pressure; 5. work-life conflict pressure; 6. work feedback pressure; 7. work pressure co-score; 8. innovative idea generation; 9. innovative idea promotion; 10. following innovative application; 11. exploratory innovative application; 12. total innovative behavior score)

As shown in Tables 4-7, there is a significant positive correlation between "teaching working pressure", "work-life conflict pressure" and innovative behavior of kindergarten teachers; there is a negative correlation between the other four levels of stress and innovative behavior, and a significant negative correlation between the total score of working pressure and the total score of innovative behavior of kindergarten teachers.

Prediction of Kindergarten Teachers' Working Pressure on Innovative Behavior

To understand the prediction of each dimension of kindergarten teachers' working pressure on innovative behavior, the researcher conducted a stepwise regression analysis using the scores of each dimension of kindergarten teachers' working pressure and kindergarten teachers' innovative behavior, and the results are shown in Table 4-8 and analyzed as follows:

From Table 4-8, it can be seen that the six dimensions of kindergarten teachers' working pressure can predict 66.6% of kindergarten teachers' innovative behavior variables; where, "management system pressure" had the highest predictive power, with 55.2% of the explanatory variables; "teaching working pressure" had the lowest predictive power, with 0.2% of the explanatory variables. Based on the statistical analysis, the regression equation between work stress and innovative behavior of kindergarten teachers was obtained as follows:

Innovative behavior of kindergarten teachers = 5.275 - .267 * management system pressure - .310 * interpersonal pressure - .124 * work feedback pressure - .218 * professional development pressure +.166* teaching working pressure +.107* work-life

conflict pressure

Table 4-8: Stepwise Regression Analysis of the Dimensions of kindergarten Teachers' Working Pressure on Kindergarten Teachers' Innovative Behavior,

Levels	R	R^2	$\triangle R^2$	Beta	F
1.Management system pressure	.743	.552	.552	-.267	1232.702***
2.Interpersonal pressure	.793	.629	.628	-.310	845.166***
3.Work feedback pressure	.802	.643	.642	-.124	599.166***
4.Professional development pressure	.807	.652	.650	-.218	466.525***
5.Teaching pressure	.813	.661	.659	.166	388.136***
6.Work-life pressure	.816	.666	.664	.107	331.123***

* $p<.05$ ** $p<.01$ ***$p<.001$

Conclusion and Recommendations

The purpose of this study was to explore the current situation, relationship between work stress and innovative behavior of kindergarten teachers and its influence. Through the questionnaire survey, interviews and analysis of 1,002 kindergarten teachers, the following research findings were drawn:

Conclusion

The kindergarten teachers who participated in the survey had a high level of working pressure in general, among which the pressure from non-teaching work such as "interpersonal relationship" and "management system" was higher, while the pressure from teaching work was the lowest. Besides, kindergarten teachers who participated in the survey had low scores on innovation behaviors as a whole, with the lowest scores on exploratory innovation applications.

There were no differences in the working pressure and innovative behavior of kindergarten teachers by gender and nature of the organization they worked for, but there were significant differences in the working pressure and innovative behavior of kindergarten teachers by age and education.

"Teaching pressure" and "work-life conflict pressure" were significantly and positively correlated with kindergarten teachers' innovative behavior, while the other four levels of stress were significantly and negatively correlated with kindergarten teachers' innovative behavior.

The prediction of kindergarten teachers' working pressure on innovative behavior was 66.6%, where "management system pressure", "interpersonal pressure", "work feedback pressure" and "professional development pressure" negatively predicted kindergarten teachers' innovative behaviors, while "teaching pressure" and "work-life conflict pressure" positively predicted kindergarten teachers' innovative behaviors.

Recommendations

In recent years, "innovation" has become a major concern in many countries. China attaches particular importance to "innovation", as evidenced by the constant calls for the cultivation of innovative talents and the proliferation of educational initiatives to promote innovation. However, the high demand for innovation in organizations is matched by high levels of work stress among organizational members (Wang, Lan, and Li, 2022). Therefore, it is necessary to pay attention to kindergarten teachers' working pressure and take necessary measures to reduce or help kindergarten teachers to adjust to their working pressure.

We shall motivate kindergarten teachers to learn and develop consciously and to continuously improve their motivation to achieve. Consciously learning is an inexhaustible motivation for kindergarten teachers to acquire adaptive work as well as to continuously improve their creative abilities. According to Bi and Huang (2005), individuals will strive for excellence or overcome difficulties in work that they consider important or valuable, and will have an intrinsic drive to reach a certain ideal state. Enhancing kindergarten teachers' motivation to achieve is the key to fundamentally improving kindergarten teachers' ability to adjust to stress and continuously improve their creative abilities.

We shall improve the work ecology of kindergarten teachers and establish a sound institutional guarantee for kindergarten teachers' development. The study found that kindergarten teachers' innovative behavior is most constrained by the pressure from the "management system". It is important to further optimize the current kindergarten management system, actively guide kindergarten teachers to become the builders, implementers and supervisors of the management system, and provide a good ecological environment for kindergarten teachers' work, learning and development by using the system to protect their rights and interests.

We shall support the construction of professional learning communities for kindergarten teachers and guide the emergence of positive interpersonal relationships. Research has found that the "interpersonal pressure" of kindergarten teachers is high and negatively affects their innovative behavior to some extent. Building professional development learning communities enables teachers with the same value orientation to form learning and development teams, which can promote pedagogical innovation, enhance professional competence, and lead to positive interpersonal relationships among kindergarten teachers (Wang & Cheng, 2023).

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